UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

# CLASSIFICATION AND CORRELATION OF THE SOILS OF DELAWARE COUNTY, INDIANA

A SUBSET OF MLRA 111

This correlation was prepared by Gary R. Struben. The Final Field Review was conducted December 5-9, 1994 by Thomas R. Ziegler, Assistant State Soil Scientist. Other participants were Gary R. Struben, Project Leader; Scot A. Haley, Project Member; Dena L. Roberts, Project Member; Donald R. Ruesch, Area Soil Scientist; and Byron G. Nagel, Assistant State Soil Scientist.

In preparing this correlation, the following was available: 1) soil survey text manuscript, 2) soil maps, 3) field notes and transect data, 4) soil correlation samples, 5) laboratory data, 6) soil interpretation records, and 7) SOI-6 file.

## Headnote for Detailed Soil Survey Legend

Map symbols consist of a combination of letters, or letters and numbers. The first capital letter is the initial one of the map unit name. Then two lower case letters that follow separate the map units having names that begin with the same letter. It does not separate sloping or eroded phases. The second capital letter indicates the slope class. Symbols without a slope letter are for miscellaneous areas. Symbols ending with a number indicates the erosion class. Symbols ending with a capital letter as the fifth character indicate inundation phases or other soil phases.

SOIL CORRELATION OF
DELAWARE COUNTY, INDIANA

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| BdhAH, SaA, SbA, ScA | Bellcreek silty clay loam, 0 to 1 percent slopes, frequently flooded, drief duration | BdhAH | Bellcreek silty clay loam, 0 to 1 percent slopes, frequently flooded, brief duration |
| BdlC2, BeC2, MgC2 | Belmore silt loam, 6 to 12 percent slopes, eroded | BdlC2 | Belmore loam, 6 to 12 percent slopes, eroded |
| BdmA, BeA | Belmore silt loam, 0 to 1 percent slopes | BdmA | Belmore silt loam, 0 to 1 percent slopes |
| BdmB2, BeB, BeB2 | Belmore silt loam, 1 to 5 percent slopes, eroded | BdmB2 | Belmore silt loam, 1 to 5 percent slopes, eroded |
| BdsAN, WcA | Benadum silt loam, drained, 0 to 1 percent slopes | BdsAN | Benadum silt loam, drained, 0 to 1 percent slopes |
| BdsAU, WaA | Benadum silt loam, undrained, 0 to 1 percent slopes | BdsAU | Benadum silt loam, undrained, 0 to 1 percent slopes |
| BltA, BlA, BlB, BlB2 | Blount silt loam, 0 to 2 percent slopes | BltA | Blount silt loam, 0 to 2 percent slopes |
| BmlA, BmB, DeA, BmA, ApA, DeB, DeB2, ArA | Blount-Del Rey silt loams, 0 to 1 percent slopes | BmlA | Blount-Del Rey silt loams, 0 to 1 percent slopes |
| CdgC3, ChC3, ChD3, FxC3, FsC3, FoC3, FsD3, EoC3 | Casco sandy clay loam, 6 to 15 percent slopes, severely eroded | CdgC3 | Casco sandy clay loam, 6 to 15 percent slopes, severely eroded |
| CudA, CrA, CrB, CrB2, CtB, CuA, WsA, CuB, CuB2 | Crosby silt loam, 0 to 2 percent slopes | CudA | Crosby silt loam, 0 to 2 percent slopes |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| DdxA, HaA, HcA, DkA, DgA, HgA, HoA, TuB, TuA, DkB | Digby-Haney silt loams, 0 to 1 percent slopes | DdxA | Digby-Haney silt loams, 0 to 1 percent slopes |
| EdxA, EkA, EmA, FoA | Eldean silt loam, 0 to 2 percent slopes | EdxA | Eldean silt loam, 0 to 2 percent slopes |
| EdxB2, EmB2, EkB2 | Eldean silt loam, 2 to 6 percent slopes, eroded | EdxB2 | Eldean silt loam, 2 to 6 percent slopes, eroded |
| EdxC2, EmC2, EkC2 | Eldean silt loam, 6 to 12 percent slopes, eroded | EdxC2 | Eldean silt loam, 6 to 12 percent slopes, eroded |
| EdxD2, EmD2, EkD2, FoD2 | Eldean silt loam, 12 to 18 percent slopes, eroded | EdxD2 | Eldean silt loam, 12 to 18 percent slopes, eroded |
| EdxE2, EkE2 | Eldean silt loam, 18 to 35 percent slopes, eroded | EdxE2 | Eldean silt loam, 18 to 35 percent slopes, eroded |
| FexB2, FoB2, FsB2 | Fox loam, 2 to 6 percent slopes, eroded | FexB2 | Fox loam, 2 to 6 percent slopes, eroded |
| FexC2, FoC2 | Fox loam, 6 to 12 percent slopes, eroded | FexC2 | Fox loam, 6 to 12 percent slopes, eroded |
| FgoB2, FpB2 | Fox-Muncie complex, 2 to 6 percent slopes, eroded | FgoB2 | Fox-Muncie complex, 2 to 6 percent slopes, eroded |
| FgoC2, FpC2 | Fox-Muncie complex, 6 to 12 percent slopes, eroded | FgoC2 | Fox-Muncie complex, 6 to 12 percent slopes, eroded |
| FgrC3, FpC3 | Fox-Muncie clay loams, 6 to 12 percent slopes severely eroded | FgrC3 | Fox-Muncie clay loams, 6 to 12 percent slopes, severely eroded |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| FgrD3, FpD3, FpD2 | Fox-Muncie clay loams, 12 to 18 percent slopes, severely eroded | FgrD3 | Fox-Muncie clay loams, 12 to 18 percent slopes, severely eroded |
| GlnAH, GeA, GfA, EgA, GbA, GhA | Gessie-Eel silt loams, 0 to 1 percent slopes, frequently flooded, brief duration | GlnAH | Gessie-Eel silt loams, 0 to 1 percent slopes, frequently flooded, brief duration |
| GlrB2, GkB2, MyB2 | Glynwood silt loam, 1 to 4 percent slopes, eroded | GlrB2 | Glynwood silt loam, 1 to 4 percent slopes, eroded |
| GlyB3, GnB3 | Glynwood-Mississinewa clay loams, 2 to 6 percent slopes, severely eroded | GlyB3 | Glynwood-Mississinewa clay loams, 2 to 6 percent slopes, severely eroded |
| HtbAN, CdA, HwA | Houghton muck, drained, 0 to 1 percent slopes | HtbAN | Houghton muck, drained, 0 to 1 percent slopes |
| HtbAU, CcA, HuA, MhA, AdA | Houghton muck, undrained, 0 to 1 percent slopes | HtbAU | Houghton muck, undrained, 0 to 1 percent slopes |
| LdfAH, LeA, LdA, LaA | Lash loam, brief duration, 0 to 1 percent slopes, frequently flooded | LdfAH | Lash loam, 0 to 1 percent slopes, frequently flooded, brief duration |
| LneAH, BgA, BgB, AuA, BgB2, DoA, WdA | Lickcreek silt loam, occasionally flooded, very brief duration | LneAH | Lickcreek silt loam, 0 to 3 percent slopes, occasionally flooded, very brief duration |
| LshC3, LpC3, LtC3 | Losantville clay loam, 5 to 10 percent slopes, severely eroded | LshC3 | Losantville clay loam, 5 to 10 percent slopes, severely eroded |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| LshD3, LtD3, LpD3, LmD2 | Losantville clay loam, 12 to 18 percent slopes severely eroded | LshD3 | Losantville clay loam, 10 to 15 percent slopes, severely eroded |
| LteE, HnE, MyE2 | Lybrand-Belmore loams, 15 to 30 percent slopes | LteE | Lybrand-Belmore loams, 15 to 30 percent slopes |
| LteG, HnG, RoG | Lybrand-Belmore loams, 30 to 50 percent slopes | LteG | Lybrand-Belmore loams, 30 to 50 percent slopes |
| MecA, MgA | Martinsville loam, 0 to 2 percent slopes | MecA | Martinsville loam, 0 to 2 percent slopes |
| MecB, MgB2, TwB2, ApB, MgB, ShB2, TuB2 | Martinsville silt loam, 2 to 6 percent slopes, eroded | MecB | Martinsville loam, 2 to 6 percent slopes |
| MmcB2, MkB2, WuB, WuB2 MkA | Miami loam, 2 to 6 percent slopes, eroded | MmcB2 | Miami loam, 2 to 6 percent slopes, eroded |
| MmcC2, MkC2 | Miami silt loam, 6 to 12 percent slopes, eroded | MmcC2 | Miami loam, 6 to 12 percent slopes, eroded |
| MoeB2, MmB2, CkA, CkB, MnB2, CmB, CmB2, CkB2, LmB2, LrB2, CtB2 | Miamian loam, 1 to 5 percent slopes, eroded | MoeB2 | Miamian loam, 1 to 5 percent slopes, eroded |
| MoeC2, MmC2, MnC2 | Miamian loam, 5 to 10 percent slopes, eroded | MoeC2 | Miamian loam, 5 to 10 percent slopes, eroded |
| MorA, PnA, WtA | Milford mucky silty clay, 0 to 1 percent slopes, pothole | MorA | Milford mucky silty clay, pothole, 0 to 1 percent slopes |
| MphA, MsA | Milford silty clay loam, stratified sandy substratum, 0 to 1 percent slopes | MphA | Milford silty clay loam, stratified sandy substratum, 0 to 1 percent slopes |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| MprA, MtA, MrA | Milford silty clay loam, till substratum, 0 to 1 percent slopes | MprA | Milford silty clay loam, till substratum, O to 1 percent slopes |
| MryA, MvA, MuA, MjA, LkA | Millgrove silty clay loam, 0 to 1 percent slopes | MryA | Millgrove silty clay loam, 0 to 1 percent slopes |
| MumC2, MyC2 | Morley silt loam, 5 to 10 percent slopes, eroded | MumC2 | Morley silt loam, 5 to 10 percent slopes, eroded |
| MumD2, MyD2 | Morley silt loam, 10 to 15 percent slopes, eroded | MumD2 | Morley silt loam, 10 to 15 percent slopes, eroded |
| MvbC3, MzC3, GnC3, MwC3 | Morley-Mississinewa complex, 5 to 10 percent slopes, severely eroded | MvbC3 | Morley-Mississinewa clay loams, 5 to 10 percent slopes, severely eroded |
| MvbD3, MzD3, MyD3 | Morley-Mississinewa clay loams, 10 to 15 percent slopes, severely eroded | MvbD3 | Morley-Mississinewa clay loams, 10 to 15 percent slopes, severely eroded |
| MvxA, MoA | Mountpleasant silt loam, 0 to 2 percent slopes | MvxA | Mountpleasant silt loam, 0 to 2 percent slopes |
| MvxB2, MoB2 | Mountpleasant silt loam, 2 to 6 percent slopes, eroded | MvxB2 | Mountpleasant silt loam, 2 to 6 percent slopes, eroded |
| MvxC2, MoC2 | Mountpleasant silt loam, 6 to 12 percent slopes, eroded | MvxC2 | Mountpleasant silt loam, 6 to 12 percent slopes, eroded |
| MwzAN, MzA, PeA, LhA, Pe | Muskego muck, drained, 0 to 1 percent slopes | MwzAN | Muskego muck, drained, 0 to 1 percent slopes |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| MwzAU, PaA, LgA | Muskego muck, undrained, 0 to 1 percent slopes | MwzAU | Muskego muck, undrained, 0 to 1 percent slopes |
| ObxA, OgA, OcA | Ockley silt loam, 0 to 2 percent slopes | ObxA | Ockley silt loam, 0 to 2 percent slopes |
| ObxB2, OgB, OcB2, OcB | Ockley silt loam, 2 to 6 percent slopes, eroded | ObxB2 | Ockley silt loam, 2 to 6 percent slopes, eroded |
| PgaA, PkA, PdA, PgA | Pella silty clay loam, 0 to 1 percent slopes | PgaA | Pella silty clay loam, 0 to 1 percent slopes |
| PkkA, PsA | Pewamo silty clay loam, 0 to 1 percent slopes | PkkA | Pewamo silty clay loam, 0 to 1 percent slopes |
| Pmg, Pu | Pits, gravel | Pmg | Pits, gravel |
| Pml, Pw | Pits, quarry | Pml | Pits, quarry |
| ReyA, RhA, RgA, RkA | Rensselaer loam, 0 to 1 percent slopes | ReyA | Rensselaer loam, 0 to 1 percent slopes |
| RroAH, RrA, RsA | Ross-Lash loams, 0 to 1 percent slopes, frequently flooded, brief duration | RroAH | Ross-Lash loams, 0 to 1 percent slopes, frequently flooded, brief duration |
| RrwB, RcA, RcB | Royerton loam, 1 to 5 percent slopes | RrwB | Royerton loam, 1 to 5 percent slopes |
| SgmAH, SpA, SnA, SoA, SmA | Shoals silt loam, frequently flooded, 0 to 1 percent slopes | SgmAH | Shoals silt loam, 0 to 1 percent slopes, frequently flooded, brief duration |
| SmsAH, StA, SrA, SsA | Sloan silt loam, frequently flooded, 0 to 1 percent slopes | SmsAH | Sloan silt loam, 0 to 1 percent slopes, frequently flooded, brief duration |

DELAWARE COUNTY, INDIANA --Continued

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| SnlA, WgA, CoA | Southwest silt loam, 0 to 1 percent slopes | SnlA | Southwest silt loam, 0 to 1 percent slopes |
| SvsE2, SxE2, SvE, SvD2 | Strawn-Belmore loams, 15 to 30 percent slopes, eroded | SvsE2 | Strawn-Belmore loams, 15 to 30 percent slopes, eroded |
| SvsG, SxG, SvG | Strawn-Belmore loams, 30 to 50 percent slopes | SvsG | Strawn-Belmore loams, 30 to 50 percent slopes |
| ThrA, TmA, BrA, BsA, Kr, CzA, McA, Ko, KoA, KrA, TsA | Treaty silty clay loam, 0 to 1 percent slopes | ThrA | Treaty silty clay loam, 0 to 1 percent slopes |
| Uam, Ud | Udorthents, loamy | Uam | Udorthents, loamy |
| Uaz, Uh | Udorthents, sandy | Uaz | Udorthents, sandy |
| UccA, UpA | Urban land-Crosby-Treaty complex, 0 to 2 percent slopes | UccA | Urban land-Crosby-Treaty complex, 0 to 2 percent slopes |
| UdmA, UmA | Urban land-Blount-Pewamo complex, 0 to 2 percent slopes | UdmA | Urban land-Blount-Pewamo complex, 0 to 2 percent slopes |
| UemB, UrB, UyA | Urban land-Fox complex, 1 to 6 percent slopes | UemB | Urban land-Fox complex, 1 to 6 percent slopes |
| UetB, UtB | Urban land-Glynwood complex, 2 to 6 percent slopes | UetB | Urban land-Glynwood complex, 2 to 6 percent slopes |
| UfuA, UvA | Urban land-Millgrove complex, 0 to 1 percent slopes | UfuA | Urban land-Millgrove complex, 0 to 1 percent slopes |
| UhaB, UwB | Urban land-Wawaka-Miami complex, 1 to 6 percent slopes | UhaB | Urban land-Wawaka-Miami complex, 1 to 6 percent slopes |

| Field symbols | Field map unit name | Publi-cation symbol | Approved map unit name |
|---|---|---|---|
| WbgB3, SvB3, SvB2, SwB3 | Wapahani clay loam, 1 to 5 percent slopes, severely eroded | WbgB3 | Wapahani clay loam, 1 to 5 percent slopes, severely eroded |
| WbgC3, SvC3, SvC2, SwC3, SvD3, SwD3 | Wapahani clay loam, 5 to 10 percent slopes, severely eroded | WbgC3 | Wapahani clay loam, 5 to 10 percent slopes, severely eroded |
| Wcp, w, water | Water, noncensus | Wcp | Water, noncensus |
| Wct, w, water | Water, census | Wct | Water, census |
| WdrA, RmA | Wawaka silt loam, 0 to 2 percent slopes | WdrA | Wawaka silt loam, 0 to 2 percent slopes |
| WdrB2, RmB2, RmB | Wawaka silt loam, 2 to 6 percent slopes, eroded | WdrB2 | Wawaka silt loam, 2 to 6 percent slopes, eroded |
| WdrC2, RmC2 | Wawaka silt loam, 6 to 12 percent slopes, eroded | WdrC2 | Wawaka silt loam, 6 to 12 percent slopes, eroded |
| WonA, WuA | Williamstown silt loam, 0 to 2 percent slopes | WonA | Williamstown silt loam, 0 to 2 percent slopes |

Series Established by this Correlation and County of Type Location

BELLCREEK (Delaware Co.)
BENADUM (Delaware Co.)
LICKCREEK (Delaware Co.)
MISSISSINEWA (Delaware Co.)
MOUNTPLEASANT (Delaware Co.)
MUNCIE (Delaware Co.)
ROYERTON (Delaware Co.)
SOUTHWEST (Elkhart Co.)
WAPAHANI (Delaware Co.)
WAWAKA (Delaware Co. - Reactivated)

Series Dropped or Made Inactive

NONE

Cooperators' Names and Credits

The cooperators for the front cover are:
United States Department of Agriculture
Natural Resources Conservation Service
in cooperation with the Purdue University
Agricultural Experiment Station

The credits to be given on page ii of the published soil survey are as follows:
This survey was made cooperatively by the National Resources Conservation Service and the Purdue University Agricultural Experiment Station. It is part of the technical assistance furnished to the Delaware County Soil and Water Conservation District.

Prior Soil Survey Publications

The last soil survey of Delaware County was completed in 1968 and published by the United States Department of Agriculture, Soil Conservation Service in July 1972. Reference to the prior soil survey will be included in the literature citation of the manuscript. This survey replaces the July 1972 soil survey, provides additional data, updated soil interpretations and 1:12,000 scale soil maps on an orthophotographic base.

Instructions for Map Compilation, Map Finishing, and Digitizing

Map compilation is being completed by the field soil scientists with supervision from the cartographic technicians at the Indiana state office. Selected county roads will be numbered. The soil maps are being digitized by the Michigan state office.

Conventional and Special Symbols Legend

Only those symbols indicated on the NRCS-SOILS-37A (3/95) will be shown on the legend and placed on the soil maps. Perennial water includes miscellaneous water in Delaware County.

DEFINITIONS OF SPECIAL FEATURES FOR DELAWARE COUNTY, INDIANA SOIL SURVEY

| Feature | Label | Feature Definition |
|---|---|---|
| Escarpment, other | ESO | A relatively continuous cliff or relatively steep slope produced by erosion, or faulting breaking the general continuity of more gently sloping land surfaces. Exposed earthy material is nonsoil or very shallow, poorly developed soil. |
| Gravel pit | GPI | An open excavation from which soil and the loose underlying material have been removed, and used as a source of sand or gravel usually for construction purposes. Typically .5 to 1.5 acres. |
| Gravelly spot | GRA | Surface layer has more than 35 percent, by volume, of rock fragments that are mostly less than 3 inches in diameter. Typically .25 to 1.5 acres. |
| Marsh or swamp | MAR | A water saturated, very poorly drained area, intermittently or permanently water-covered. Marsh areas are dominantly vegetated by aquatic and grass-like plants. Swamps are dominantly vegetated by trees or shrubs. Not used in map units of poorly drained or very poorly drained soils. Typically .5 to 1.5 acres. |
| Mine or quarry | MPI | An open excavation from which bedrock material has been removed. Typically .5 to 1.5 acres. |
| Perennial water | WAT | A natural or manmade lake, pond, or pit that contains water most of the year. Typically .5 to 1.5 acres. |

| Feature | Label | Feature Definition |
|---|---|---|
| Sandy spot | SAN | An area of soil where the surface layer is sandy (loamy sand or sand) in an area where the surrounding soil or soils have a loamy or clayey surface layer. Excluded are areas where the textural classes are adjoining, such as an area of loamy sand in a surrounding area of sandy loam. Typically .25 to 1.5 acres. |
| Severely eroded spot | ERO | An area where on the average 75 percent or more of the original surface layer has been lost due to accelerated erosion in an area of surrounding soils that have lost less than 25 percent of the original surface. Typically .5 to 2.5 acres. |
| Short, steep slope | SLP | An elongated soil area that has slopes that are at least 2 slope classes steeper than the slope class of the surrounding map units. Typically .5 to 3 acres. |
| Wet spot | WET | An area of soil that is somewhat poorly drained to very poorly drained and that is at least 2 drainage classes wetter than the named soils in the surrounding map units. Typically .25 to 1.5 acres. |

General Soil Map Units

The following map units will be used on the general soil map legend:

Glynwood - Morley
Blount - Pewamo - Glynwood
Crosby - Treaty
Crosby - Treaty - Miamian
Houghton
Fox
Ross - Lash - Fox
Wawaka - Miami
Miamian - Losantville
Millgrove - Sloan

CONVERSION LEGEND FOR
DELAWARE COUNTY, INDIANA

| Field symbol | Publication symbol | Field symbol | Publication symbol | Field symbol | Publication symbol | Field symbol | Publication symbol |
|---|---|---|---|---|---|---|---|
| w | Wcp | CmB2 | MoeB | FgoC2 | FgoC2 | LaA | LdfAH |
| w | Wct | CoA | SnlA | FgrC3 | FgrC3 | LdfAH | LdfAH |
| water | Wct | CrA | CudA | FgrD3 | FgrD3 | LdA | LdfAH |
| water | Wcp | CrB | CudA | FoA | EdxA | LeA | LdfAH |
| AdA | HtbAU | CrB2 | CudA | FoB2 | FexB2 | LgA | MwzAU |
| ApA | BmlA | CtB | CudA | FoC2 | FexC2 | LhA | MwzAH |
| ApB | MecB | CtB2 | MoeB2 | FoC3 | CdgC3 | LkA | MryA |
| ArA | BmlA | CudA | CudA | FoD2 | EdxD2 | LmB2 | MoeB2 |
| AuA | LneAH | CuA | CudA | FpB2 | FgoB2 | LmD2 | LpD3 |
| BdhAH | BdhAH | CuB | CudA | FpC2 | FgoC2 | LneAH | LneAH |
| BdlC2 | BdlC2 | CuB2 | CudA | FpC3 | FgrC3 | LpC3 | LshC3 |
| BdmA | BdmA | CzA | ThrA | FpD2 | FgrD3 | LpD3 | LshD3 |
| BdmB2 | BdmB2 | DdxA | DdxA | FpD3 | FgrD3 | LrB2 | MoeB2 |
| BdsAN | BdsAN | DeA | BmlA | FsB2 | FexB2 | LshC3 | LshC3 |
| BdsAU | BdsAU | DeB | BmlA | FsC3 | CdgC3 | LshD3 | LshD3 |
| BeA | BdmA | DeB2 | BmlA | FsD3 | CdgC3 | LteE | LteE |
| BeB | BdmB2 | DgA | DdxA | FxC3 | CdgC3 | LteG | LteG |
| BeB2 | BdmB2 | DkA | DdxA | GbA | GlnAH | LtC3 | LshC3 |
| BeC2 | BdlC2 | DkB | DdxA | GeA | GlnAH | LtD3 | LshD3 |
| BgA | LneAH | DoA | LneAH | GhA | GlnAH | McA | ThrA |
| BgB | LneAH | EdxA | EdxA | GkB2 | GlrB2 | MecA | MecA |
| BgB2 | LneAH | EdxB2 | EdxB2 | GlnAH | GlnAH | MecB | MecB |
| BltA | BltA | EdxC2 | EdxC2 | GlrB2 | GlrB2 | MgA | MecA |
| BlA | BltA | EdxD2 | EdxD2 | GlyB3 | GlyB3 | MgB | MecB |
| BlB | BltA | EdxE2 | EdxE2 | GnB3 | GlyB3 | MgB2 | MecB |
| BlB2 | BltA | EfA | GlnAH | GnC3 | MvbC3 | MgC2 | BdlC2 |
| BmlA | BmlA | EgA | GlnAH | HaA | DdxA | MhA | HtbAU |
| BmA | BmlA | EkA | EdxA | HcA | DdxA | MjA | MryA |
| BmB | BmlA | EkB2 | EdxB2 | HgA | DdxA | MkA | MmcB2 |
| BrA | ThrA | EkC2 | EdxC2 | HnE | LteE | MkB2 | MmcB2 |
| BsA | ThrA | EkD2 | EdxD2 | HnG | LteG | MkC2 | MmcC2 |
| CcA | HtbAU | EkE2 | EdxE2 | HoA | DdxA | MmcB2 | MmcB2 |
| CdgC3 | CdgC3 | EmA | EdxA | HtbAN | HtbAN | MmcC2 | MmcC2 |
| CdA | HtbAN | EmB2 | EdxB2 | HtbAU | HtbAU | MmB2 | MoeB2 |
| ChC3 | CdgC3 | EmC2 | EdxC2 | HuA | HtbAU | MmC2 | MoeC2 |
| ChD3 | CdgC3 | EmD2 | EdxD2 | HwA | HtbAN | MnB2 | MoeB2 |
| CkA | MoeB2 | EoC3 | CdgC3 | Ko | ThrA | MnC2 | MoeC2 |
| CkB | MoeB2 | FexB2 | FexB2 | KoA | ThrA | MoeB2 | MoeB2 |
| CkB2 | MoeB2 | FexC2 | FexC2 | Kr | ThrA | MoeC2 | MoeC2 |
| CmB | MoeB2 | FgoB2 | FgoB2 | KrA | ThrA | MorA | MorA |

| Field symbol | Publication symbol | Field symbol | Publication symbol | Field symbol | Publication symbol | Field symbol | Publication symbol |
|---|---|---|---|---|---|---|---|
| MoA | MvxA | PgaA | PgaA | SvsE2 | SvsE2 | WbgB3 | WbgB3 |
| MoB2 | MvxB2 | PgA | PgaA | SvsG | SvsG | WbgC3 | WbgC3 |
| MoC2 | MvxC2 | PkkA | PkkA | SvB2 | WbgB3 | Wcp | Wcp |
| MphA | MphA | PkA | PgaA | SvB3 | WbgB3 | Wct | Wct |
| MprA | MprA | Pmg | Pmg | SvC2 | WbgC3 | WcA | WcA |
| MryA | MryA | Pml | Pml | SvC3 | WbgC3 | WdrA | WdrA |
| MrA | MprA | PnA | MorA | SvD2 | SvsE2 | WrdB2 | WdrB2 |
| MsA | MphA | PsA | PkkA | SvD3 | WbgC3 | WdrC2 | WdrC2 |
| MtA | MprA | Pu | Pmg | SvE | SvsE2 | WdA | LneAH |
| MumC2 | MumC2 | Pw | Pml | SvG | SvsG | WgA | SnlA |
| MumD2 | MumD2 | RcA | RrwB | SwB3 | WbgC3 | WonA | WonA |
| MuA | MryA | RcB | RrwB | SwC3 | WbgC3 | WsA | CudA |
| MvbC3 | MvbC3 | ReyA | ReyA | SwD3 | WbgC3 | WtA | MorA |
| MvbD3 | MvbD3 | RgA | ReyA | SxE2 | SvsE2 | WuA | WonA |
| MvxA | MvxA | RhA | ReyA | SxG | SvsG | WuB | MmcB2 |
| MvxB2 | MvxB2 | RkA | ReyA | ThrA | ThrA | WuB2 | MmcB2 |
| MvxC2 | MvxC2 | RmA | WdrA | TmA | ThrA | | |
| MvA | MryA | RmB | WdrB2 | TsA | ThrA | | |
| MwzAN | MwzAN | RmB2 | WdrB2 | TuA | DdxA | | |
| MwzAU | MwzAU | RmC2 | WdrC2 | TuB | DdxA | | |
| MwC3 | MvbC3 | RoG | LteG | TuB2 | MecB | | |
| MyB2 | GlrB2 | RroAH | RroAH | TwB2 | MecB | | |
| MyC2 | MumC2 | RrwB | RrwB | Uam | Uam | | |
| MyD2 | MumD2 | RrA | RroAH | Uaz | Uaz | | |
| MyD3 | MvbD3 | RsA | RroAH | UccA | UccA | | |
| MyE2 | LteE | SaA | BdhAH | Ud | Uam | | |
| MzA | MwzAN | SbA | BdhAH | UdmA | UdmA | | |
| MzC3 | MvbC3 | ScA | BdhAH | UemB | UemB | | |
| MzD3 | MvbD3 | SxG | SvsG | UetB | UetB | | |
| ObxA | ObxA | SgmAH | SgmAH | UfuA | UfuA | | |
| ObxB2 | ObxB2 | ShB2 | MecB | Uh | Uaz | | |
| OcA | ObxA | SmA | SgmAH | UhaB | UhaB | | |
| OcB | ObxB2 | SmsAH | SmsAH | UmA | UdmA | | |
| OcB2 | ObxB2 | SnlA | SnlA | UpA | UccA | | |
| OgA | ObxA | SnA | SgmAH | UrB | UemB | | |
| OgB | ObxB2 | SoA | SgmAH | UtB | UetB | | |
| PaA | MwzAU | SpA | SgmAH | UvA | UfuA | | |
| PdA | PgaA | SrA | SmsAH | UwB | UhaB | | |
| Pe | MwzAN | SsA | SmsAH | UyA | UemB | | |
| PeA | MwzAN | StA | SmsAH | WaA | BdsAU | | |

Classification of Pedons Sampled for Laboratory Analysis

| Sampled as | Lab number | Pub-sym | | Approved series |
|---|---|---|---|---|
| Belmore | S90IN035-7 | ObxB2 | c | Ockley |
| Belmore | S92IN035-12 | BdmB2 | | Belmore |
| Blount | S94IN035-3 | BltA | | Blount |
| Blount | S94IN035-6 | BltA | | Blount |
| Blount | S94IN035-9 | BltA | | Blount |
| Casco | S90IN035-3 | CdgC3 | c | Casco |
| Crosby | S91IN035-1 | CudA | | Crosby |
| Crosby | S92IN035-15 | CudA | | Crosby |
| Del Rey | S91IN035-6 | BmlA | c | Del Rey |
| Glynwood | S91IN035-2 | GlrB2 | c | Glynwood |
| Glynwood | S94IN035-4 | GlrB2 | | Glynwood |
| Glynwood | S94IN035-8 | GlrB2 | | Glywood |
| Lippincott | S90IN035-5 | MryA | | Millgrove |
| Losantville | S90IN035-2 | WbgC3 | | Wapahani |
| Martisco | S90IN035-4 | HtbAu | | Houghton |
| Miami | S90IN035-6 | MmcBz | c | Miami |
| Miami | S92IN035-11 | WdrA | | Wawaka |
| Miami | S92IN035-13 | WonA | | Williamstown |
| Miami | S92IN035-14 | WbgB3 | | Wapahani |
| Miamian | S92IN035-8 | MvxA | | Mountpleasant |
| Miamian | S92IN035-9 | MvxA | a | Mountpleasant |
| Miamian | S92IN035-10 | MvxC2 | c | Mountpleasant |
| Morley | S94IN035-5 | MvbC3 | | Morley |
| Pella | S92IN035-4 | MorA | c | Milford |
| Pewamo | S91IN035-7 | PkkA | c | Pewamo |
| Pewamo | S94IN035-7 | PkkA | | Pewamo |
| Pewamo | S94IN035-10 | PkkA | | Pewamo |
| Pewamo | S94IN035-11 | PkkA | | Pewamo |
| Rensselaer | S91IN035-4 | ReyA | c | Rensselaer |
| Richardville | S90IN035-1 | WdrA | | Wawaka |
| Richardville | S92IN035-5 | WdrA | | Wawaka |
| Richardville | S92IN035-6 | WdrA | a | Wawaka |
| Richardville | S92IN035-7 | WdrB2 | c | Wawaka |
| Saranac | S92IN035-3 | BdhAH | a | Bellcreek |
| Treaty | S91IN035-5 | ThrA | c | Treaty |
| Williamstown | S91IN035-3 | WonA | c | Williamstown |

All samples analyzed at NSSL. a) Official Soil Series Pedon.
b) Taxonomic Pedon. c) Map Unit Representative Pedon

Notes to accompany the classification and correlation of the soils of Delaware County, Indiana, by Gary R. Struben.

| | |
|---|---|
| BELMORE SERIES | The typical pedon is from Delaware County, Indiana. These areas were mapped as Fox, Martinsville and Miami, gravelly substratum, in the 1972 published soil survey report of Delaware County. |
| BELLCREEK SERIES | The Bellcreek series is established by this correlation for soils that have sola more than 28 inches thick and have smectitic mineralogy. They were formerly mapped as Saranac soils. These areas were mapped as stratified substratum phases of Pewamo and Kokomo in the 1972 published soil survey report of Delaware County. |
| BENADUM SERIES | The Benadum series is established by this correlation for soils with a coprogenous earth substratum that were formerly included in mapping with the Wallkill soils. |
| BLOUNT SERIES | The typical pedon is from Mercer County, Ohio (OSD). |
| CASCO SERIES | The typical pedon is from Sheboygan County, Wisconsin (OSD). These areas were mapped as severely eroded phases of the Fox series in the 1972 published soil survey report of Delaware County. |
| CROSBY SERIES | The typical pedon is from Henry County, Indiana (OSD). |
| DEL REY SERIES | The typical pedon is from Iroquois County, Illinois (OSD). These areas were mapped as Blount in the 1972 published soil survey report of Delaware County. |
| DIGBY SERIES | The typical pedon is from Delaware County, Indiana. These areas were mapped as Crosby, stony subsoil, and Fox in the 1972 published soil survey report of Delaware County. |
| EEL SERIES | The typical pedon is from Randolph County, Indiana (OSD). These areas were mapped as Genesee in the 1972 published soil survey report of Delaware County. |
| ELDEAN SERIES | The typical pedon is from Miami County, Ohio (OSD). These areas were mapped as Fox and Hennepin in the 1972 published soil survey report of Delaware County. |
| FOX SERIES | The typical pedon is from Ozaukee County, Wisconsin (OSD). |

| | |
|---|---|
| GESSIE SERIES | The typical pedon is from Miami County, Indiana (OSD). These areas were mapped as Genesee in the 1972 published soil survey report of Delaware County. |
| GLYNWOOD SERIES | The typical pedon is from Auglaize County, Ohio (OSD). These areas were mapped as Morley and Blount in the 1972 published soil survey report of Delaware County. |
| HANEY SERIES | The typical pedon is from Delaware County, Indiana. These areas were mapped as Fox and Crosby, stony subsoil, in the 1972 published soil survey report of Delaware County. |
| HOUGHTON SERIES | The typical pedon is from Clinton County, Michigan (OSD). These areas were mapped as Carlisle in the 1972 published soil survey report of Delaware County. |
| LASH SERIES | The typical pedon is from Tippecanoe County, Indiana (OSD). These areas were mapped as Ross and Genesee in the 1972 published soil survey report of Delaware County. |
| LICKCREEK SERIES | The Lickcreek series is established by this correlation for soils that were formerly mapped as variants and flooded phases of the Belmore series. These areas were mapped as Ross, Fox and Crosby, stony subsoil, in the 1972 published soil survey report of Delaware County. |
| LOSANTVILLE SERIES | The typical pedon is from Henry County, Indiana (OSD). These areas were mapped as Hennepin and severely eroded phases of Miami in the 1972 published soil survey report of Delaware County. |
| LYBRAND SERIES | The typical pedon is from Delaware County, Ohio (OSD). These areas were mapped as Hennepin and Morley in the 1972 published soil survey report of Delaware County. |
| MARTINSVILLE SERIES | The typical pedon is from Hendricks County, Indiana (OSD). |
| MIAMI SERIES | The typical pedon is from Hendricks County, Indiana (OSD). |
| MIAMIAN SERIES | The typical pedon is from Montgomery County, Ohio (OSD). These areas were mapped as Miami in the 1972 published soil survey report of Delaware County. |
| MILFORD SERIES | The typical pedon is from Iroquois County, Illinois (OSD). These areas were mapped as stratified substratum phases of Kokomo and Pewamo in the 1972 published soil survey report of Delaware County. |

MILLGROVE SERIES — The typical pedon is from Wood County, Ohio (OSD). These areas were mapped as Brookston, stony subsoil, and Sebewa in the 1972 published soil survey report of Delaware County.

MISSISSINEWA SERIES — The Mississinewa series is established by this correlation for soils that were formerly mapped as severely eroded phases of Morley and thin solum phases of Glynwood. These areas were mapped as Morley and Hennepin in the 1972 published soil survey report of Delaware County.

MORLEY SERIES — The typical pedon is from Adams County, Indiana (OSD).

MOUNTPLEASANT SERIES — The Mountpleasant series is established by this correlation for soils that were formerly mapped as gravelly substratum phases of Miami and are in the fine particle-size class.

MUNCIE SERIES — The Muncie series is established by this correlation for soils that were formely mapped as Morley, gravelly substratum phases.

MUSKEGO SERIES — The typical pedon is from Ozaukee County, Wisconsin (OSD). These areas were mapped as Carlisle and Linwood in the 1972 published soil survey report of Delaware County.

OCKLEY SERIES — The typical pedon is from Carroll County, Indiana (OSD).

PELLA SERIES — The typical pedon is from Iroquois County, Illinois (OSD). These areas were mapped as Rensselaer and stratified substratum phases of Pewamo and Kokomo in the 1972 published soil survey report of Delaware County.

PEWAMO SERIES — The typical pedon is from Washtenaw County, Michigan (OSD).

RENSSELAER SERIES — The typical pedon is from Marshall County, Indiana (OSD).

ROSS SERIES — The typical pedon is from Ross County, Ohio (OSD).

ROYERTON SERIES — The Royerton series is established by this correlation for soils formerly mapped as Rawson Variant soils that have less than 35 percent clay in the substratum. These areas were mapped as Miami, heavy substratum, in the 1972 published soil survey report of Delaware County.

SHOALS SERIES — The typical pedon is from Henry County, Indiana (OSD).

SLOAN SERIES — The typical pedon is from Mercer County, Ohio (OSD). These areas were mapped as Sloan, Brookston, stony subsoil, Sebewa and Rensselaer in the 1972 published soil survey report of Delaware County.

SOUTHWEST SERIES — The Southwest series is established by this correlation for soils that are fine-silty and were formerly included in mapping with the Washtenaw soils. The typical pedon is from Elkhart County (OSD). These areas were mapped as Pewamo and Brookston, overwash, in the 1972 published soil survey report of Delaware County.

STRAWN SERIES — The typical pedon is from Tazewell County, Illinois (OSD). These areas were mapped as Hennepin and Miami in the 1972 published soil survey report of Delaware County.

TREATY SERIES — The typical pedon is from Montgomery County, Indiana (OSD). These areas were mapped as Brookston in the 1972 published soil survey report of Delaware County.

WAPAHANI SERIES — The Wapahani series is established by this correlation for soils that were formerly mapped as severely eroded phases of Miami.

WAWAKA SERIES — The Wawaka series is re-activated and established for soils that were formerly mapped as gravelly substratum phases of Miami and are in the fine-loamy particle-size class.

WILLIAMSTOWN SERIES — The typical pedon is from Decatur County, Indiana (OSD). These areas were mapped as Miami in the 1972 published soil survey report of Delaware County.

CLASSIFICATION OF THE SOILS

| Soil name | Family or higher taxonomic class |
|---|---|
| Bellcreek---- | Fine, smectitic, mesic Fluvaquentic Endoaquolls |
| Belmore------ | Fine-loamy, mixed, mesic Typic Hapludalfs |
| Benadum------ | Fine-silty, mixed, nonacid, mesic Thapto-Histic Fluvaquents |
| Blount------- | Fine, illitic, mesic Aeric Epiaqualfs |
| Casco-------- | Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Hapludalfs |
| Crosby------- | Fine, mixed, mesic Aeric Epiaqualfs |
| Del Rey------ | Fine, illitic, mesic Aeric Epiaqualfs |
| Digby-------- | Fine-loamy, mixed, mesic Aeric Endoaqualfs |
| Eel---------- | Fine-loamy, mixed, mesic Fluvaquentic Eutrochrepts |
| Eldean------- | Fine, mixed, mesic Typic Hapludalfs |
| Fox---------- | Fine-loamy over sandy or sandy-skeletal, mixed, mesic Typic Hapludalfs |
| Gessie------- | Fine-loamy, mixed, mesic Fluventic Eutrochrepts |
| Glynwood----- | Fine, illitic, mesic Aquic Hapludalfs |
| Haney-------- | Fine-loamy, mixed, mesic Aquic Hapludalfs |
| Houghton----- | Euic, mesic Typic Medisaprists |
| Lash--------- | Coarse-loamy, mixed, mesic Fluventic Hapludolls |
| Lickcreek---- | Fine-loamy, mixed, mesic Typic Argiudolls |
| Losantville-- | Fine, mixed, mesic Oxyaquic Hapludalfs |
| Lybrand------ | Fine, illitic, mesic Typic Hapludalfs |
| Martinsville- | Fine-loamy, mixed, mesic Typic Hapludalfs |
| Miami-------- | Fine-loamy, mixed, mesic Oxyaquic Hapludalfs |
| Miamian------ | Fine, mixed, mesic Oxyaquic Hapludalfs |
| Milford------ | Fine, mixed, mesic Typic Endoaquolls |
| Millgrove---- | Fine-loamy, mixed, mesic Typic Argiaquolls |
| Mississinewa- | Fine, illitic, mesic Aquic Hapludalfs |
| Morley------- | Fine, illitic, mesic Oxyaquic Hapludalfs |
| Mountpleasant | Fine, mixed, mesic Typic Hapludalfs |
| Muncie------- | Fine, mixed, mesic Typic Hapludalfs |
| Muskego------ | Coprogenous, euic, mesic Limnic Medisaprists |
| Ockley------- | Fine-loamy, mixed, mesic Typic Hapludalfs |
| Pella-------- | Fine-silty, mixed, mesic Typic Endoaquolls |
| Pewamo------- | Fine, mixed, mesic Typic Argiaquolls |
| Rensselaer--- | Fine-loamy, mixed, mesic Typic Argiaquolls |
| Ross--------- | Fine-loamy, mixed, mesic Cumulic Hapludolls |
| Royerton----- | Fine-loamy, mixed, mesic Oxyaquic Hapludalfs |
| Shoals------- | Fine-loamy, mixed, nonacid, mesic Aeric Fluvaquents |
| Sloan-------- | Fine-loamy, mixed, mesic Fluvaquentic Endoaquolls |
| Southwest---- | Fine-silty, mixed, nonacid, mesic Typic Fluvaquents |
| Strawn------- | Fine-loamy, mixed, mesic Typic Hapludalfs |
| Treaty------- | Fine-silty, mixed, mesic Typic Argiaquolls |
| Udorthents--- | Mixed, mesic Typic Udipsamments |
| Udorthents--- | Loamy, mixed, mesic Typic Udorthents |
| Wapahani----- | Fine-loamy, mixed, mesic Oxyaquic Hapludalfs |
| Wawaka------- | Fine-loamy, mixed, mesic Typic Hapludalfs |
| Williamstown- | Fine-loamy, mixed, mesic Aquic Hapludalfs |

Certifications

The Soil Survey Area 11 Team Leader certifies that:

a) The field mapping was completed in December 1994.

b) Interpretations have been coordinated with adjoining survey areas.

c) The location of all typical pedons in the survey area are correct and are within delineations that have the referenced name.

d) All typical pedons are correctly classified according to Soil Taxonomy and its amendments.

e) The soil maps are complete, accurate and consistent.

f) Delaware County has made a quality join with the following survey areas:

Blackford and Jay Counties (published); the Blackford and Jay Counties survey will accept the following Delaware Co. map units. The correlation document for Blackford and Jay Counties will not be amended at this time. A record of the changes is recorded on soil maps, and copies will be filed at the state office in the Blackford and Jay Counties case file.

Map units that will be added to Blackford and Jay Counties Soil Survey are:

| | |
|---|---|
| BltA | Blount silt loam, 0 to 2 percent slopes |
| BmlA | Blount-Del Rey silt loams, 0 to 1 percent slopes |
| DdxA | Digby-Haney silt loams, 0 to 1 percent slopes |
| GlrB2 | Glynwood silt loam, 1 to 4 percent slopes, eroded |
| MphA | Milford silty clay loam, stratified sandy substratum, 0 to 1 percent slopes |
| MumD2 | Morley silt loam, 10 to 15 percent slopes, eroded |
| PkkA | Pewamo silty clay loam, 0 to 1 percent slopes |
| SnlA | Southwest silt loam, 0 to 1 percent slopes |

Grant County (published); the Grant County survey will accept the following Delaware County map units. The correlation document for Grant County will not be amended at this time. A record of the changes is recorded on soil maps, and copies will be filed at the state office in the Grant County case file.
Map units that will be added to Grant County Soil Survey are:

| | |
|---|---|
| BmlA | Blount-Del Rey silt loams, 0 to 1 percent slopes |

| | |
|---|---|
| CdgC3 | Casco sandy clay loam, 6 to 15 percent slopes, severely eroded |
| DdxA | Digby-Haney silt loams, 0 to 1 percent slopes |
| GlrB2 | Glynwood silt loam, 1 to 4 percent slopes, eroded |
| GlyB3 | Glynwood-Mississinewa clay loams, 2 to 6 percent slopes, severely eroded |
| LneAH | Lickcreek silt loam, 0 to 3 percent slopes, occasionally flooded, very brief duration |
| LteG | Lybrand-Belmore loams, 30 to 50 percent slopes |
| MvbC3 | Morley-Mississinewa clay loams, 5 to 10 percent slopes, severely eroded |
| RroAH | Ross-Lash loams, 0 to 1 percent slopes, frequently flooded, brief duration |
| SmsAH | Sloan silt loam, 0 to 1 percent slopes, frequently flooded, brief duration |

Henry County (published); The Henry County survey will accept the following Delaware County map units. The correlation document for Henry County will not be amended at this time. A record of the changes is recorded on soil maps and copies will be filed at the state office in the Henry County case file.

Map units that will be added to Henry County Soil Survey are:

| | |
|---|---|
| CudA | Crosby silt loam, 0 to 2 percent slopes |
| DdxA | Digby-Haney silt loams, 0 to 1 percent slopes |
| LshC3 | Losantville clay loam, 5 to 10 percent slopes, severely eroded |
| MoeB2 | Miamian loam, 1 to 5 percent slopes, eroded |
| MvxA | Mountpleasant silt loam, 0 to 2 percent slopes |
| MvxB2 | Mountpleasant silt loam, 2 to 6 percent slopes, eroded |
| MryA | Millgrove silty clay loam, 0 to 1 percent slopes |
| PgaA | Pella silty clay loam, 0 to 1 percent slopes |
| SmsAH | Sloan silt loam, 0 to 1 percent slopes, frequently flooded, brief duration |
| SnlA | Southwest silt loam, 0 to 1 percent slopes |
| ThrA | Treaty silty clay loam, 0 to 1 percent slopes |
| Uaz | Udorthents, sandy |
| WdrA | Wawaka silt loam, 0 to 2 percent slopes |

WdrB2 Wawaka silt loam, 2 to 6 percent slopes, eroded

Randolph County (published); The Randolph County survey will accept the following Delaware Co. map units. The correlation document for Randolph Co. will not be amended at this time. A record of the changes is recorded on soil maps, and copies will be filed at the state office in the Randolph County case file. Map units that will be added to Randolph Co. soil survey are:

BmlA Blount-Del Rey silt loams, 0 to 1 percent slopes

CudA Crosby silt loam, 0 to 2 percent slopes

LshC3 Losantville clay loam, 5 to 10 percent slopes, severely eroded

MoeB2 Miamian loam, 1 to 5 percent slopes, eroded

MvbC3 Morley-Mississinewa clay loams, 5 to 10 percent slopes, severly eroded

ThrA Treaty silty clay loam, 0 to 1 percent slopes

Madison County (published; The Madison County soil survey has been placed in an extensive revision category. This survey is scheduled for updating, and a quality join was not made.

General Soil Map

A 1:250,000 STATSGO map was used as the base map for the general soil map. This map will be used to update all adjoining subsets. Therefore, a general soil map join was not made with the adjoining subsets.

Approval Signature and Date

| | |
|---|---|
| _____ | _____ |
| Travis Neely / Date | Robert L. Eddleman / Date |
| Soil Survey Area 11 Team leader | State Conservationist |